

CLAIMS

1. Use of a male-sterile plant for avoiding dissemination of a transgene of interest which is integrated into the genome of the said plant.
2. Use according to Claim 1 in which the said plant carries a cytoplasmic male sterility.
3. Use according to Claim 1 in which the said plant carries a nuclear male sterility.
4. Use of an excisable AMS gene as a means which permits screening for genetically transformed plants which have integrated a transgene of interest and eliminated an excisable DNA fragment, with the said excisable DNA fragment being able:
- either to be the said AMS gene itself,
 - or to contain the AMS gene linked genetically to an undesirable DNA fragment such that the said AMS gene and the said undesirable DNA fragment can be excised simultaneously, with the said undesirable DNA fragment preferably being a marker gene, preferably a gene which confers resistance to an antibiotic.
5. ~~Use according to any one of the preceding claims,~~ characterized in that the said plant is selected from maize, rape, tobacco and tomato.
6. Transgenic plant, or part or extract of a transgenic plant, characterized in that the said transgene of interest is genetically linked to an AMS gene which is combined with elements which enable it to be expressed in plant cells, in particular a promoter and a transcription terminator.
7. Vector, in particular a plasmid, characterized in that it contains a transgene of interest which is combined with elements which enable it to be expressed in plant cells, in particular a promoter and a transcription terminator, and which is genetically linked to an AMS gene which is combined with elements which enable it to be expressed in plant cells, in particular a promoter and a transcription terminator.

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8. Cell host, in particular a bacterium such as *Agrobacterium tumefaciens*, which is transformed with a vector according to Claim 7.

9. Process for inserting an AMS gene into a plant, characterized in that it comprises transforming plant cells, in particular using a cell host ~~according to Claim 8, which host is itself~~ transformed with a vector according to Claim 7, so as to integrate an AMS gene, which is linked genetically to a transgene of interest, into the genome of these cells.

10. Process for eliminating an excisable DNA fragment, characterized in that it comprises:

- either

a) transforming plant cells, in particular using a cell host ~~according to Claim 8, which host is itself~~ transformed with a vector according to Claim 7 which comprises an excisable AMS gene, so as to integrate the said AMS gene, which is excisable by recombination or transposition, into the genome of these cells;

b). regenerating transformed plants from the abovementioned transformed plant cells;

c) transforming plant cells so as to integrate an element inducing transposition or recombination into the genome of these cells;

d) regenerating transformed plants from the transformed plant cells mentioned in step c);

e) crossing the male-sterile plants obtained in step b) with the lines which express the transposase or the recombinase and which were obtained in step d), with excision events taking place in the F1 plants.

- or

a') transforming plant cells, in particular using a cell host ~~according to Claim 8, which host is itself~~ transformed with a vector according to Claim 7 which comprises an excisable AMS gene, so as to integrate the said AMS gene, which is excisable by recombination or transposition, into the genome of these cells;

b') regenerating transformed plants from the abovementioned transformed plant cells;

c') transforming the plant cells derived from the abovementioned transformed plants so as to
5 integrate an element which induces transposition or recombination into the genome of these cells;

d') regenerating transformed plants from the transformed plant cells mentioned in step c').

11. Process for producing an expression product of
10 a transgene of interest, characterized in that it comprises:

a) - either transforming plant cells, in particular using a cell host ~~according to Claim 8, which host is itself~~ transformed with a vector according to
15 Claim 7, so as to integrate an AMS gene which is linked genetically to a transgene of interest into the genome of these cells;

- or transforming plant cells which carry a cytoplasmic or nuclear male sterility so as to
20 integrate a transgene of interest into the genome of these cells;

b) regenerating transformed plants from the abovementioned transformed plant cells;

c) recovering the expression product of the said
25 transgene of interest in the said abovementioned transformed cells or plants, in particular by extraction followed, where appropriate, by a purification.

eliminating an excisable DNA fragment
12. Kit for ~~implementing the process according to~~
30 ~~Claim 10~~, characterized in that it contains, on the one hand, a vector according to Claim 7 which comprises an excisable AMS gene, or a plant or plant part which has been transformed with the said vector, and, on the other hand, a vector which carries a source of
35 transposase or recombinase, or a plant or plant part which has been transformed with the said vector.

Add B7

Add E1

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